



**St. Paul's
C.E. Primary School**
Together on life's great adventure

Science Intent, Implementation, Impact

'Through the love of God, we protect our school community. Together we trust, hope, persevere and flourish on life's great adventures.'

"Science is a way of thinking much more than it is a body of knowledge."

Carl Sagan

Intent

At St Paul's Church of England primary school, Science is an integral part of our curriculum and we have created a curriculum that is inclusive and engaging for all pupils. We deliver high-quality, inclusive science lessons, which encourage *children's curiosity* and enable all children to achieve their personal best. Our children are exposed to a wide variety of topics and are encouraged to ask questions throughout. Our aim is to invent Scientists, who are able to persevere, through our stimulating and challenging experiences which help every child secure and extend their scientific knowledge and vocabulary, as well as promoting a love and thirst for learning. By doing this we are preparing our pupils for the future supporting them to make decisions, be responsible and to take *every opportunity on life's great adventure*.

Implementation

At St Pauls Church of England Primary School, we provide a progressive curriculum, which develops the way children work and think scientifically. Discretely taught Science lessons build on scientific skills, through questions and investigations while other opportunities naturally arise in other subjects.

Planning for Science is arranged into topics throughout the year groups. This allows children to build on prior learning and develop their skills from previous years. Retrieval practices are within all lessons to allow children to remember more and to support them in using this knowledge to support new learning. The question 'What do I know already?' is often used within lessons allowing the pupils to select their own equipment, interpret results, and becoming increasingly more confident in coming to their own conclusions.

- All teachers create a positive attitude towards science within their classrooms and reinforce the expectation that all children are capable of achieving high standards.
- Children receive two hours of science in KS2 a week to ensure knowledge is built upon regularly.
- Each lesson builds on prior knowledge and provides the opportunity for children to work scientifically.
- Working scientifically skills are embedded into lessons to ensure these skills are being *developed throughout the children's time at school*.
- New vocabulary and challenging concepts are introduced through direct teaching. Throughout the year groups, vocabulary is developed, in keeping with topics.
- Extended writing is encouraged within units of teaching and teachers teach the skills for writing up experiments discretely. Teachers are encouraged to focus on one area at a time.
- We offer a wide range of extra-curricular activities, visits, trips, and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class
- Children are assessed throughout units to ensure misconceptions are dealt with promptly. In KS2 units are assessed using informal quizzes or the question 'What have you learned?'
- Throughout the academic year children's progress is monitored through book looks and pupil voice questionnaires.

Impact

A progression of skills and knowledge has been built so that science learning builds year on year, with children consolidating and deepening their skills as they move through school. Smooth transitions can be made between year groups and a consistent approach is used.

As well as ensuring that children acquire the appropriate age-related knowledge linked to the science curriculum, our curriculum also ensures that children are equipped with transferable skills that will support them in their everyday lives and across other curriculum subjects. This includes a richer vocabulary, which will enable children to articulate their understanding of taught concepts. Problem-solving and reasoning skills; the ability to tackle problems with confidence and independence, developing their questions and finding ways to answer them.

Children will develop a better understanding of our world and our environment and will be able to make informed decisions about how they treat our world. Through the development of these essential transferable skills, we will have children with high aspirations, which will see them through to further study, work, and successful adult life.